August 9, 1988

Mr. Richard Carlson
Director
Illinois Environmental Protection Agency
220 Churchill Road
Springfield, IL 62706

Attention: Mr. Brian Martin

Re: Analytical Results
Phase III - Supplemental Site Investigation
Dutch Boy Paint Plant
Chicago, Illinois

Dear Mr. Carlson:

I write on behalf of NL Industries, Inc. ("NL") which has retained Toxcon Engineering Company, Inc. ("Toxcon") to furnish technical consulting services regarding conditions at the former Dutch Boy site (the "site") in Chicago, Illinois.

As you know, Toxcon, with the approval of the Illinois Environmental Protection Agency ("IEPA"), devised a Phase III Site Investigation Plan to (1) define the nature and extent of lead in the soils at the site and in adjacent properties; (2) determine if asbestos is present in surface soils at the south end of the site; and (3) determine if the underground tanks on the west side of the site have leaked.

On September 8, 1987, Toxcon submitted to IEPA the analytical results from the field sampling undertaken in June 1987 pursuant to the Site Investigation Plan, along with proposed locations for additional sampling to better delineate the vertical and lateral extent of areas containing elevated EP toxicity lead and asbestos. Specifically, we recommended that further analysis be undertaken for total lead content and EP toxicity lead at the 3-4 foot interval at Sample Point No. 12. Toxcon also recommended resampling at Sample Point No. 33, as well as additional sampling at locations west and south of Sample Point No. 33, for total lead and EP toxicity lead. Finally, we recommended that further sampling be undertaken at two locations containing 1-10% asbestos to determine the lateral extent of soils that contain asbestos. Since levels of volatile organics indicative of tank leakage were not detected, we concluded that the underground storage tanks on the west side of the site had not leaked and, accordingly, determined that additional VOA sampling was not required.

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On September 22, 1987, I met with IEPA Project Manager, Mary Dinkel, and Staff Counsel, Donald Gimbel, at IEPA's Maywood office to discuss the analytical results, conclusions and recommendations contained in our September 8, 1987 letter. Ms. Dinkel noted her general agreement with both the conclusions drawn from the analytical results and our recommendations for further sampling. However, Ms. Dinkel requested that NL also resample offsite Sample Point No. 27, and collect samples at three locations surrounding Sample Point No. 27. Ms. Dinkel further suggested sampling at locations north and south of Sample Point No. 12 to better define the area of elevated EP toxicity lead. We agreed to continue discussion of the proposed follow-up sampling after IEPA had received and evaluated its analytical results.

On October 13, 1988, I telephoned Ms. Dinkel to inquire about her evaluation of IEPA's data and the proposed follow-up sampling. Ms. Dinkel informed me that IEPA's lead and asbestos analyses agreed with NL's, except at one sample point where IEPA's split contained concentrations of asbestos greater than 1%. Accordingly, she suggested, and we agreed, to conduct further sampling at this particular location -- Sample Point No. 3A -- as well as at the locations we had recommended. Ms. Dinkel also informed me that IEPA agreed with NL's conclusion that no further sampling associated with the underground tanks was necessary since the VOA analytical data indicated the tanks had not leaked.

By letter dated December 11, 1987, Brian Martin, who succeeded Ms. Dinkel, outlined the follow-up sampling plan and indicated it was appropriate for NL and Toxcon to proceed with the supplemental field investigation.

Thus, on February 10, 1988 and February 11, 1988, Toxcon conducted the additional field sampling agreed to by IEPA. We have reviewed the analytical results of the additional sampling and we now write to apprise IEPA of those results and our conclusions. The analytical results of the February 1988 field investigation are represented on the enclosed plot plans. Certified laboratory data sheets and chain of custody records are included in Appendix A.

Summary of Supplemental Field Sampling

A. Lead Samples

1) EP toxicity lead levels greater than 5.0 mg/l, which is designated as hazardous under EPA's definition in 40 C.F.R. Section 261, were detected at the 0-1 foot stratum at Sample Point No. 12 and Sample Point No. 1211, located south of Sample Point No. 12. Samples

collected at the 3-4 foot stratum did not contain elevated levels of EP toxicity lead.

2) A repeat surface sample collected at Sample Point No. 27 and a surface sample collected at a location 20 feet southeast of Sample Point No. 27, denoted as Sample Point No. 27SE, contained elevated levels of EP toxicity lead.

3) A repeat sample collected at site characterization Sample Point No. 33 did not contain elevated EP toxicity lead, nor did the repeat sample contain elevated levels of total lead.

4) Sample No. S29P, located west of site characterization Sample Point No. 33 and south of parkway Sample Point No. 29, contained elevated EP toxicity lead at the 0-1 foot stratum, but not at the 1-2 foot stratum.

B. Asbestos Samples

1) Samples collected at locations 10 feet from Sample Points Nos. 3A and 4A contained less than 1% asbestos.

2) All samples collected at locations 10 and 20 feet from Sample Point No. 8A contained concentrations of asbestos greater than 1%.

Discussion

A. Lead Sampling Results - Drawing 001

Analytical results from the June 1987 field sampling showed elevated levels of EP toxicity lead at Sample Point Nos. 12 and 27. The results also showed that site characterization Sample No. 33 contained elevated total lead. Accordingly, supplemental field sampling was undertaken to determine the levels of EP toxicity lead in these areas.

1. Sample Point No. 12

To determine the lateral extent of elevated EP toxicity lead levels in the area of Sample Point No. 12, samples were collected at two new locations located half the distance between Sample Point No. 12 and the nearest previously sampled locations to the north (Sample Point No. 14A) and to the south (Sample Point No. 11). The new sample points are denoted, respectively, as Sample Point Nos. 1214 and 1211 (See Drawing 001).

To determine the vertical extent of elevated EP toxicity lead, samples were collected at the 0-1 foot, 3-4 foot and 6-7 foot strata. Samples from the February, 1988 sampling in the 0-1 foot stratum at Sample Point Nos. 1211 and 1214, and in the 3-4 foot stratum at Sample Point Nos. 12 and 1211, were analyzed for total lead and EP toxicity lead.

The analytical results from the February 1988 field sampling revealed EP toxicity lead greater than 5 mg/l only in the 0-1 foot stratum at Sample Point No. 1211.

SAMPLE POINT	DEPTH	TOTAL LEAD ppm	EP TOXICITY LEAD mg/l
1214	0-1'	6470.	0.76
1211	0-1'	3390.	23.4
12	3-4'	26.	0.09
1211	3-4	3130.	0.24

The analytical results from the June 1987 field sampling which indicated elevated EP toxicity lead in the 0-1 foot stratum at Sample Point No. 12, and the results from the February 1988 sampling set forth above, show that the area of elevated EP toxicity lead on the west side of the site lies between Sample Point No. 1214 to the north and Sample Point No. 11 to the south. The vertical extent of soils containing EP toxicity lead in this area is confined to the 0-3 foot stratum. Based on these results, it appears that approximately 100 cubic yards of soil around Sample Point No. 12 are likely to be affected.

The eastern boundary of EP toxicity lead in the area of Sample Point No. 12 is not presently known. Although the Phase III Site Investigation Plan called for the collection of soil samples in this area, located east of the loading dock, samples could not be collected there during the June 1987 field investigation due to the presence of large above-ground tanks. Since the tanks have now been removed, we will, at a convenient time, sample east of Sample Point No. 12 as originally planned. We do not believe, however, that this sampling will significantly change any conclusions we have drawn from the analytical results obtained to date or delay any further discussions with IEPA regarding the site.

2. Sample Point No. 33

Analytical results from the samples collected in June 1987 at Sample Point No. 33 were intended to be used for site characterization only and, therefore, the samples were analyzed for total lead, not EP toxicity lead. However, the elevated total lead levels contained in Sample No. 33 indicated that further testing should be undertaken vertically and laterally.

Accordingly, to determine the lateral extent of elevated lead levels in that area, Sample Point No 33 was resampled and four new samples were collected: two to the west of Sample Point No. 33, denoted as Sample Point Nos. S28P and S29P; and two to the south of Sample Point No. 33, denoted as Sample Point Nos. W26P and W25P. All sampling locations were within the parkways on the south side of 120th Street and the west side of Peoria Street (See Drawing 001).

To determine the vertical extent of elevated lead levels in the area of Sample Point No. 33, it was agreed that samples would be analyzed for total lead and EP toxicity lead in the 0-1 foot stratum at all five locations, and in each stratum below that if the sample indicated elevated EP toxicity lead.

The analytical results from the February 1988 field sampling revealed that Sample No. S29P contained elevated EP toxicity lead at the 0-1 foot stratum. Accordingly, the sample collected from the 1-2 foot stratum at Sample Point No. S29P was also analyzed. Elevated EP toxicity lead was not, however, detected in the 1-2 foot stratum.

SAMPLE POINT	DEPTH	TOTAL LEAD ppm	EP TOXICITY LEAD mg/l
S29P	0-1'	8120.	22.0
S29P	1-2'	20.5	0.01
S28P	0-1'	1180.	0.14
33	0-1'	1480.	0.70
W26P	0-1'	4310.	0.54
W25P	0-1'	173.	0.62

The results of the field sampling in the area of Sample Point No. 33 indicate elevated EP toxicity lead only in the 0-1 foot stratum at Sample Point No. S29P. The results of the field sampling conducted in both June 1987 and February 1988 reveal that elevated EP

toxicity lead in this area is limited to the parkway area south of 120th Street between Sample Point Nos. 34 and S28P. The vertical extent of EP toxicity lead is confined to the 0-1 foot stratum. Based on these results, it appears that approximately 30 cubic yards of soil around Sample Point No. S29P are likely to be affected.

3. Sample Point No. 27

During the June 1987 field sampling, IEPA representative Mary Dinkel requested that samples be collected offsite at what has been denoted Sample Point No. 27. Analytical results from that sampling effort showed elevated, though not hazardous, EP toxicity lead levels of 4.60 mg/l.

At the September 22, 1987 meeting with IEPA in Maywood, Ms. Dinkel requested additional sampling at this location in order to better determine the lateral extent of elevated EP toxicity lead. Ms. Dinkel indicated that she had heard unsubstantiated rumors of some unusual event in the area of Sample Point No. 27. She did not indicate that what occurred was connected in any way to operations at the site.

Ms. Dinkel suggested resampling Sample Point No. 27 and collecting samples at three new locations 20 feet north, southeast and southwest of Sample Point No. 27. In addition to these samples, we decided, during the February, 1988 sampling to collect a sample at one new location 30 feet north of Sample Point No. 27 (See Drawing 001). All field samples collected during the February 1988 sampling effort were surface samples and all were analyzed for total lead and EP toxicity lead. We note that during the June 1987 sampling the property from which Sample No. 27 was collected contained what appeared to be unoccupied structures. At the time of the February 1988 follow-up sampling, we observed that all of the structures on the property had been removed.

LOCATION NO.	DEPTH	TOTAL LEAD ppm	EP TOXICITY LEAD mg/l
27SW-20	Sfc.	12800.	1.03
27SE-20	Sfc.	2750.	9.75
27N-20	Sfc.	4570.	1.18
27R	Sfc.	9970.	8.96
27N-30	Sfc.	4710.	0.55

The analytical results of the February 1988 field sampling revealed elevated EP toxicity lead at Sample Point Nos. 27R (repeat of sample point no. 27) and 27SE, which is located 20 feet to the southeast of Sample Point No. 27R. Although the lateral extent of EP toxicity lead in this area is defined to the north and west of Sample Point No. 27R, there is no lateral definition of EP toxicity lead to the south, southeast and east of Sample Point No. 27SE.

B. Asbestos Sampling Results - Drawing 002

Analytical results from the June 1987 field sampling revealed that Sample Nos. 3A, 4A, and 8A had concentrations of asbestos greater than 1% (See Drawing 002). Accordingly, we recommended that additional samples be collected to determine the lateral extent of soils containing asbestos. It was agreed that, initially, samples collected 10 feet from Sample Point Nos. 3A, 4A and 8A would be analyzed. If those samples indicated the presence of asbestos, then samples collected 20 feet from the sample points would be analyzed.

1. Sample Point No. 3A

Sample No. 3A, collected during the June 1987 field investigation, was split with IEPA. Although the split analyzed for NL contained less than 1% asbestos, the split analyzed for IEPA contained from 1-10% asbestos. Thus, it was determined that further sampling and analysis was warranted at this location.

Accordingly, during the February 1988 field sampling, surface samples were collected 10 and 20 feet to the northeast of Sample Point No. 3A. Analysis of the sample collected 10 feet from Sample Point No. 3A indicated that the soils did not contain asbestos. Based on these results, it appears that approximately 10 cubic yards of soil around Sample Point No. 3A are likely to be affected.

2. Sample Point No. 4A

During the February 1988 supplemental sampling, surface samples were collected at locations 10 and 20 feet to the north and west of Sample Point No. 4A. The analytical results from the sampling revealed that none of the samples collected contained concentrations of asbestos greater than 1%. Based on these results, it appears that approximately 10 cubic yards of soil around Sample Point No. 4A are likely to be affected.

In our September 8, 1987 letter to IEPA, we recommended that samples be collected 10 and 20 feet to the east and west of Sample Point No. 4A. Site conditions, however, permitted sampling only to the north and west. This amendment to the sampling plan was approved by IEPA representative Brian Martin during the February 1988 sampling effort.

3. Sample Point No. 8A

Surface samples were collected during the February 1988 sampling effort at locations 10 and 20 feet to the northwest, southwest and southeast of Sample Point No. 8A.

Each of the three samples collected 10 feet from Sample Point No. 8A was found to contain concentrations of asbestos greater than 1%. Therefore, the three samples collected 20 feet from Sample Point No. 8A, denoted as Sample Point Nos. 8A-20NW, 8A-20SW and 8A-20SE, were analyzed (See Drawing 002). The results of the analyses indicated that concentrations of asbestos greater than 1% are present in all soils collected 20 feet from Sample Point No. 8A.

The analytical results of the June 1987 field sampling indicated that there was no asbestos in the soils at Sample Point Nos. 10A, 7A, 6A, and 9A to the northwest, southwest, southeast, and northeast, respectively, of Sample Point No. 8A (See Drawing 002). The lateral extent of soils containing asbestos, therefore, is limited to the area between Sample Point No. 8A and Sample Point Nos. 10A, 7A, 6A, and 9A. Based on these results, it appears that approximately 120 cubic yards of soil around Sample Point No. 8 are likely to be affected.

C. VOA RESULTS

IEPA agreed, based upon the analytical results of the June 1987 sampling, that there was no cause to undertake supplemental VOA analysis. The composite samples collected and field investigation undertaken during the June 1987 sampling effort indicated that the underground storage tanks had not leaked.

CONCLUSION

Data obtained from the June 1987 and February 1988 sampling indicates that there is one on-site area and two off-site areas containing EP toxicity lead greater than 5 mg/1. These areas are, respectively, Sample Point Nos. 12, S29P, and 27. The likely volumes of affected soils around sample points 12 and S29P are approximately 100 and 30 cubic yards, respectively. The volume of affected soils around Sample Point No. 27 cannot be estimated since the extent of affected soils to the south, southeast, and east of Sample Point No. 27SE has not been defined.

We will collect an additional sample to the east of Sample Point No. 12, as originally planned, now that the above ground tanks have been removed. This additional sampling is not expected to change the conclusions drawn from the analytical results obtained to date, nor will it delay or interfere with any further discussions with IEPA.

The data obtained from the June 1987 and February 1988 sampling indicated three locations containing asbestos in concentrations greater than 1%. These locations are at Sample Point Nos. 3A, 4A, and 8A. The likely volume of affected soils is approximately 10, 10, and 120 cubic yards, respectively.

The levels of volatile organics in the soils surrounding the underground storage tanks indicate that the tanks have not leaked.

The principal objectives of the Phase III Site Investigation Plan have been accomplished. After you have had the opportunity to review the information set forth in this letter, please feel free to call me with any questions you may have or to discuss the next step.

Regards,

Robert Finkelstein

Robert Finkelstein
Engineer

RF:pm

cc:F. Baser
J. Smith
D. Riesel

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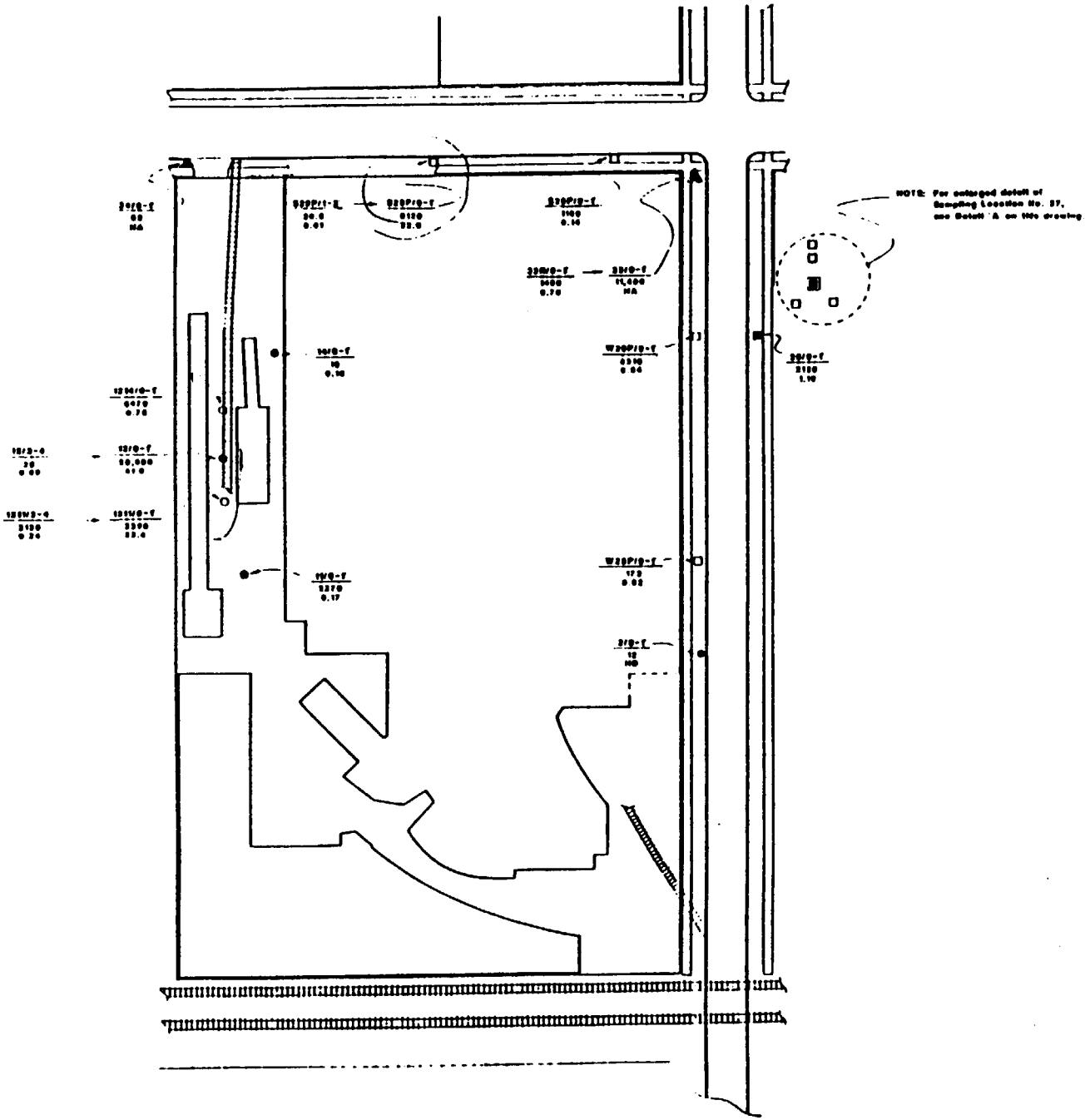

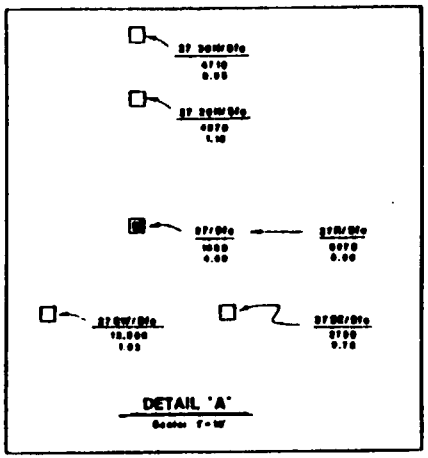

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LEGEND

Location Symbols

Feb. 88	Jun. 87	Description
□	■	Parkway Samples
△	▲	Site Characterization Samples
○	●	On-Site Samples

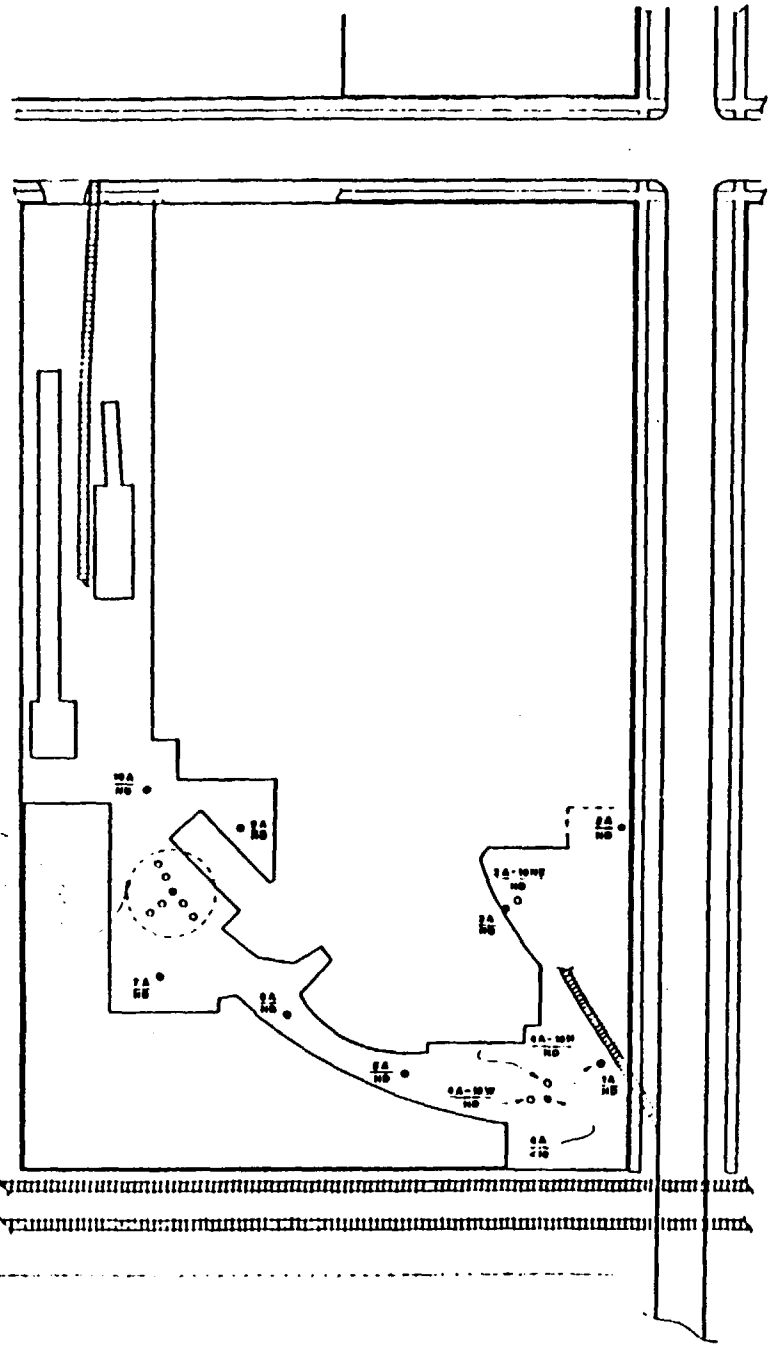
Analytical Results

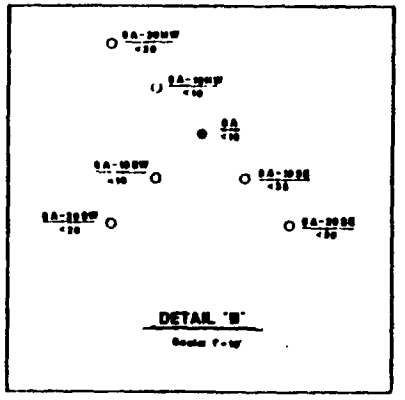
Sample Number/Sampling Depth, ft.	Example
Total Lead, ppm	100
EP Toxicity Lead, ppm	100

NA: Not Available
ND: Not Detected

Scale, feet
0 40 80 120 160

TOXCON ENGINEERING CO., Inc. Houston, Texas	
DATE 6-10-88	DRAWN BY RF
Phase II Site Investigation February 1988 Lead Sampling	
Former Dutch Boy Paint Plant Site Chicago, Illinois	01





BROC0435

LEGEND

Location Symbols

Feb. 88	Jun. 87	Description
○	●	On-Site Samples

Analytical Results

Sample Number	Sample
Asbestos Content, %	<0

All samples collected at the surface only.
ND: Not Detected

Scale, feet

TOXCON ENGINEERING CO., Inc.
Houston, Texas

Phase II Site Investigation
February 1988 Asbestos Sampling
Former Dutch Boy Paint Plant Site
Chicago, Illinois

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